

WHAT IS CLAIMED IS:

1. For use with a plasma-utilized etching equipment, an end point detector for detecting a monitor light to control an operation of an etching process by the etching equipment based on changes in a monitor light emitted by the etching equipment, comprising a sensor body for detecting said monitor light, and a collector barrel for guiding said monitor light from said etching equipment to said sensor body, wherein said collector barrel is detachable from said sensor body.
2. An end point detector according to Claim 1, wherein said collector barrel is formed of an etch-resistant material not reacting with an etching gas of said etching equipment.
3. An end point detector according to Claim 2, wherein said collector barrel is formed of either carbon or a metal.
4. An end point detector according to Claim 3, wherein said metal material is aluminum covered on a surface thereof with a layer of aluminum oxide.
5. An end point detector according to Claim 1, wherein said collector barrel has a shape such that the internal diameter gradually increases from a proximal end thereof to a distal end thereof.
6. An end point detector according to Claim 1, further comprising a plurality of collector barrels, including said collector barrel, wherein said

plurality of collector barrels are selectively detachable from said sensor body and selectively used to adjust a quantity of light received at said sensor body.

7. An end point detector according to Claim 6, wherein said plurality of collector barrels differ in roughness of an internal circumferential surface.

8. An end point detector according to Claim 6, wherein said plurality of collector barrels differ in internal diameter.

9. An end point detector according to Claim 6, wherein said plurality of collector barrels differ in length.

10. An end point detector according to Claim 6, wherein at least one of said plurality of collector barrels increases in internal diameter gradually from a proximal end thereof as a connection to said sensor body to a distal end thereof.

11. An end point detector according to Claim 10, wherein said plurality of collector barrels include at least two collector barrels with different rates of increase in internal diameter.

12. For use with a plasma-utilized etching equipment, an end point detector for detecting a monitor light to control an operation of an etching process by the etching equipment based on changes in said monitor light emitted by the etching equipment, comprising a sensor body for detecting said monitor light, and a collector barrel for guiding said monitor light from said etching equipment to said sensor body, wherein said collector barrel is selectively detachable from said sensor body to adjust a quantity of light

received at said sensor body.

13. An end point detector according to Claim 12, wherein said collector barrel is formed of a non-resin material not reacting with an etching gas of said etching equipment.

14. An end point detector according to Claim 12, wherein said collector barrel is formed of either carbon or a metal.

15. An end point detector according to Claim 13, wherein said metal material is aluminum covered on a surface thereof with a layer of aluminum oxide.